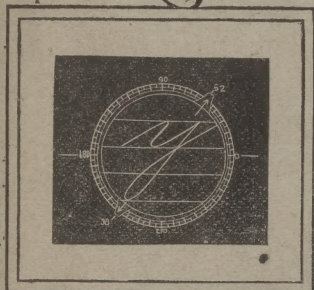


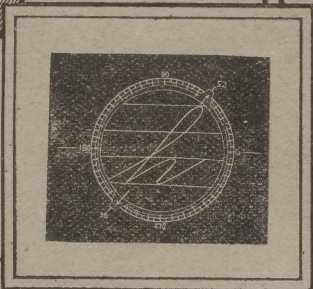
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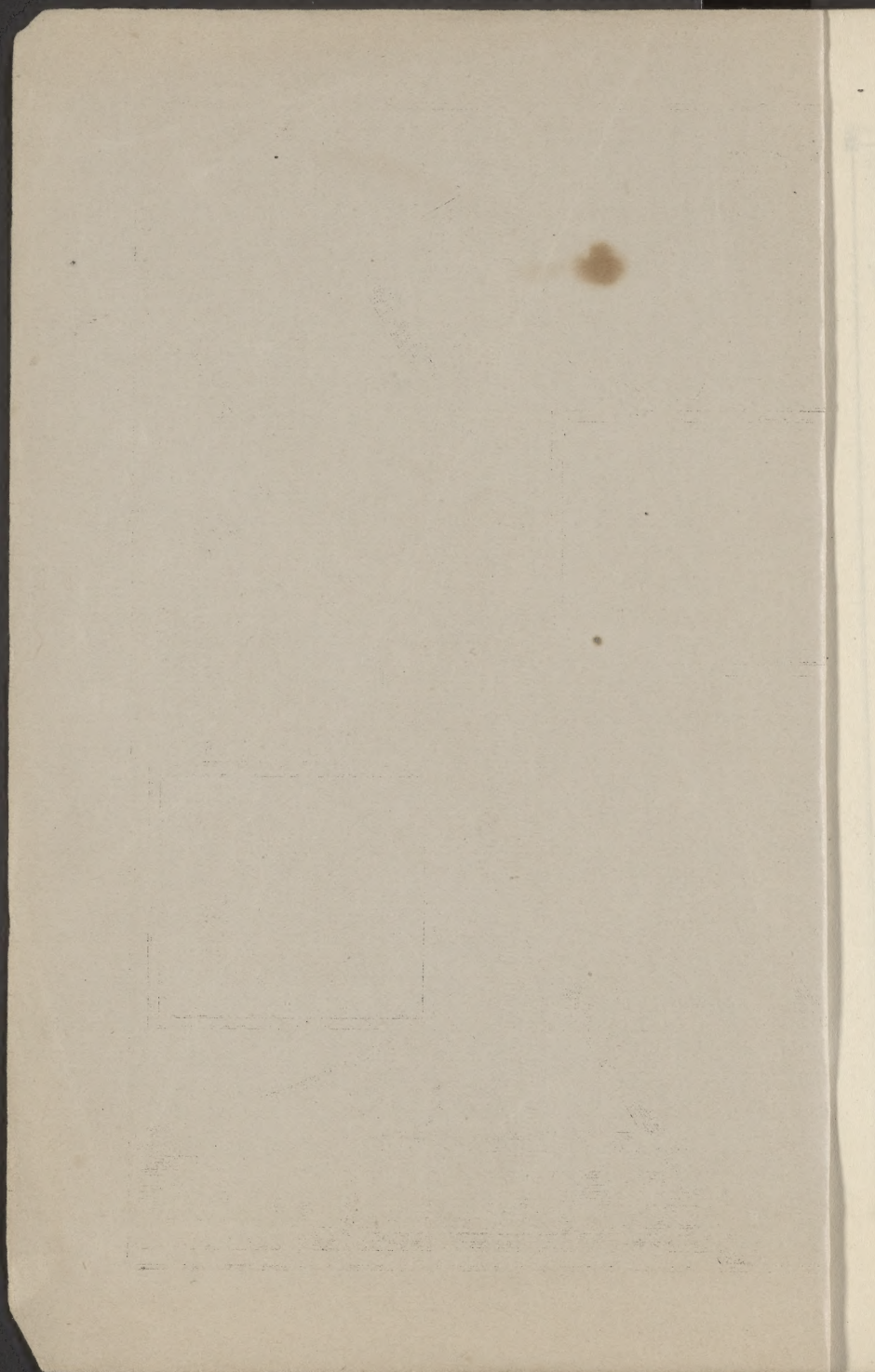
Penmanship

AND  
GUIDE  
TO



INSTRUCTION

CHARTS \*









METHOD OF

# *Illustrated Penmanship*

AND GUIDE TO REED'S

## *Penmanship Instruction*

### *Charts*

EMBELLISHED WITH PHOTOGRAPHIC CUTS IN A NOVEL MANNER

SHOWING THE TRUE SIMILARITIES AND

## *Relations of Script Letters.*

BY

### *John W. Reed.*

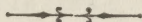
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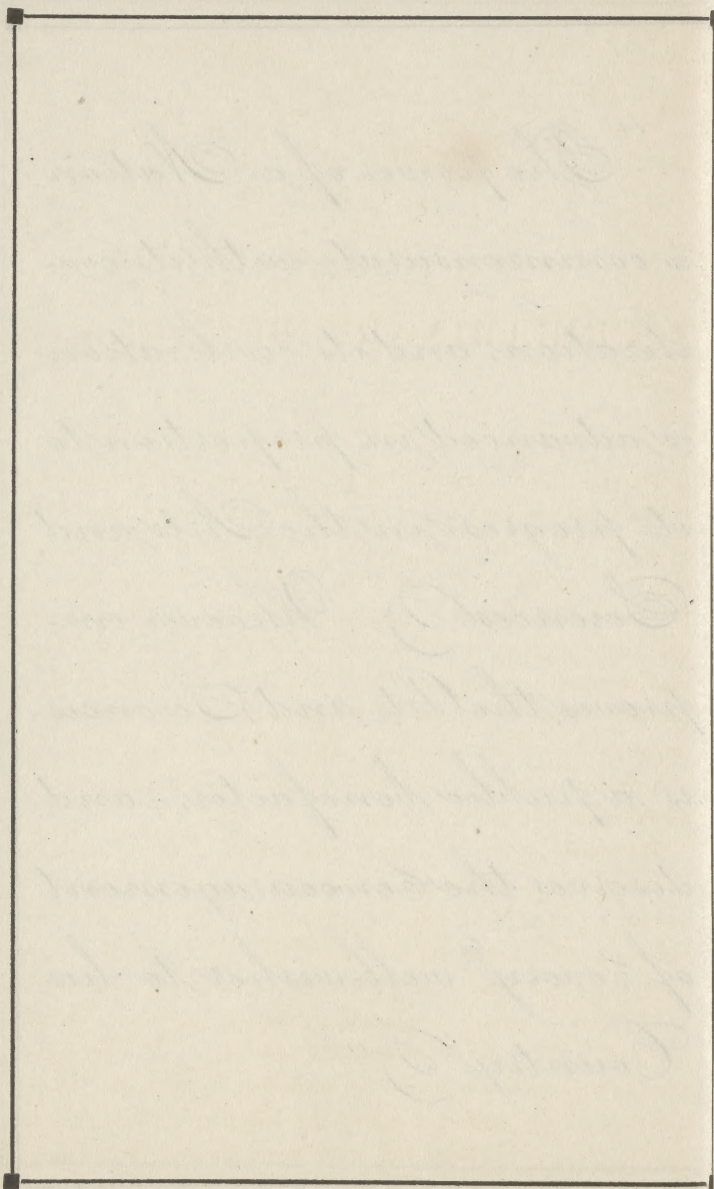


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"The power of a Nation  
is commensurate, with, its, civ-  
ilization, and, its, civilization  
is, advanced, in proportion, to  
its progress, in, the Arts, and  
Sciences. O Whoever im-  
proves, the Arts and Sciences  
is, a public benefactor, and  
deserves the Encouragement  
of Every well-wisher, to, his  
Country. O"



## PRELIMINARY REMARKS.

---

Through the medium of this ILLUSTRATED method of teaching penmanship, a knowledge of position, formation, and the proportion of letters, can be so vividly and easily presented that the learner sees at a glance the true relations existing between script letters. Besides saving much time to the competent penman, it makes teaching of this art easy to those who themselves cannot execute the letters and lessons they present. Thus, it supplies a long felt need, in one of the most important branches of education, and the old maxim, "one thing at a time and that well done," is here clearly set fourth, as being a rule applicable to Penmanship.

The combinations with their mechanical aids, are arranged so that the undeveloped mind of the learner can give attention to but one principle or letter at a time, and this is held before the mind until it is so sharply defined that it requires but little effort to retain it, while a new letter bearing the same proportions, in the greater part is produced, embodying the former, which constitutes the main feature of the new letter. The penman's faculty of imagination should be such that he can see, "in his mind's eye," the perfect form of the letter which he wishes to produce; and as has been said, water never rises above its source,

neither do the productions of the hand ever excel the conception of the mind that educates and directs its action. Therefore, to master this much neglected and useful art, you must inform the mind and train the muscles. And to give the mind that requisite information, the learner should be shown that to acquire the art of penmanship, he should first learn the foundation principles, which, when joined together in the different relations they assume to each other, form the entire alphabet, both of large and small letters. This is shown and fully illustrated in a manner at once easy of comprehension, even by the dullest learner, from Photographic illustrations of the mechanical workings of "REED'S PENMANSHIP INSTRUCTION CHARTS," and a "fac simile" of the different combinations as seen in this work, explained and illustrated, so that the pupil sees at a glance that in mastering one principle, or letter, he has virtually learned all of the letters in that combination; where the same principle is used to form the greater portion of each.

The true relations and proportions of letters are shown instantly, and when the mind has the form and proportions once fixed, the machinery, which consists of the pen, hand and arm, should be put in working order, and operated, so to speak, until it acts in perfect harmony with the mind, in producing beauty, grace and elegance, as well as ease of execution. And a pupil who is endowed with ordinary ability and perseverance, and who is not deformed, can learn to write a rapid business hand. Upon this point there can be no controversy, notwithstanding the false impression that prevails to the contrary. No elegance without great labor, should ever be the "watch-word" that arouses within us a determination to surmount every obstacle and gain the mastery of this most useful branch of learning; made doubly plain by pleasing illustrations and minute descriptions of the form and construction of each letter of the alphabet.

# POSITION.

## CHAPTER I.

The first and most important point in the practice of Penmanship is POSITION, and this is especially true to the man or student who contemplates an avocation requiring constant writing, and an almost uninterrupted position at the desk. A distorted, awkward position, is incompatible, not only with health, but freedom of motion. It is, therefore, of the utmost importance that you assume a position which will readily admit of a free and easy expansion of the chest and lungs; free circulation of the blood, and freedom of execution.



Front Position.

The most healthful position while writing is what is known as the "FRONT" position, or where the operator sits facing the desk; with body almost erect (inclining a little forward), and the sides equally distant from it. The body should not rest upon, or lean against the desk. Let the feet rest squarely upon the floor in front of you, and directly under the knees. The forearms should be placed lightly upon the desk, and at right angles to each other; the right arm resting easily upon the large muscles just forward of the elbow; the wrist elevated from one-half to three-fourths of an inch. Let the hand glide lightly on the nails of the third and fourth fingers, which should be drawn under so as to let the bearing come directly beneath the palm. The paper or book should be placed upon the desk parallel to, or in a line with the right fore arm, and be held in position with the left hand.



# Movement Exercises.

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2



3



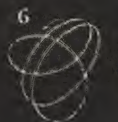
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6



7



8 Count 15



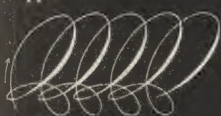
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10



11



12



13



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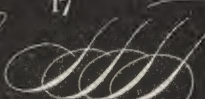
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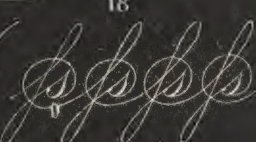
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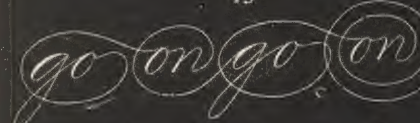
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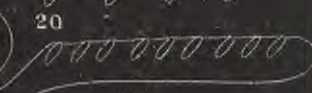
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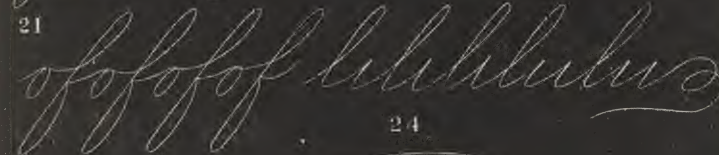


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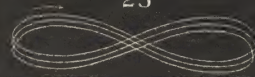
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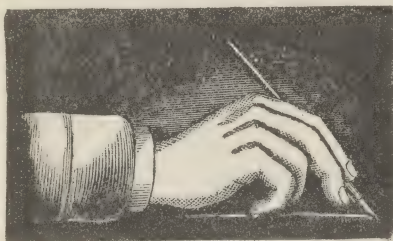


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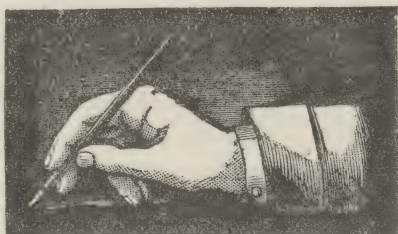


## HOLDING THE PEN.



Back View.

of the nail; rest the first finger on the upper side of the holder; let the holder pass to the left of, and cross the first finger, just forward of the knuckle joint; place the right side of the end of



Front View.

the thumb against the holder, opposite the lower joint of the first finger. Let the hand rest on the nails of the third and fourth fingers as directed in "Position." Rotate the hand to the left, until the top of the holder points toward the right shoulder; present the point of the pen squarely to the paper.

Observe that the first and second fingers and thumb are held nearly straight; having only sufficient curve for an easy and natural position.

"Sure in its flight, though swift as an eagle's wings,  
The Pen commands, and the bold figure springs;  
While the slow pencil's discontinued pace  
Repeats the stroke, but cannot reach the grace."

## MOVEMENTS.

---

All movements are mechanical; hence, to acquire a perfect, free, and easy movement, close application, untiring energy, and constant practice, are essential; and in no other way can the muscles be taught to execute and produce those perfect lines and graceful curves, which are the "sine qua non" of good penmanship.

We have already seated ourselves at the desk, and placed our pen, fingers, hand, and arms, in their proper positions, and are now ready, with pen, ink, and paper, to take up, study and practice the four principal movements, viz: "Finger Movement," "Fore-Arm Movement," "Combined Movement" and "Whole-Arm Movement."

### FINGER MOVEMENT.

In the finger movement, the fingers and thumb, alone, are used. The movements are executed by extending and contracting the fingers and thumb. This movement is employed mostly in forming the upward and downward strokes of the small letters.

### FORE-ARM MOVEMENT.

This movement consists in carrying the pen latterly across the page with the arm resting and rolling on the muscles below the elbow, and the hand gliding mechanically on the nails of the third and fourth fingers. Let it be clearly understood and remembered, that in this movement, the fingers and thumb are neither extended nor contracted; that their only duty is to hold the pen in its proper position.

### COMBINED MOVEMENT.

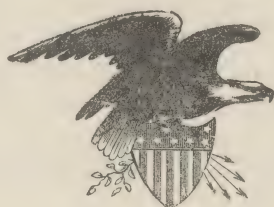
The combined movement, is a combination of the two preceeding movements, just described; in which the fingers are used to construct the upward and downward strokes, and the fore-arm to carry the pen across the page.

NOTE:—*The combined movement is used almost entirely for practical business writing.*

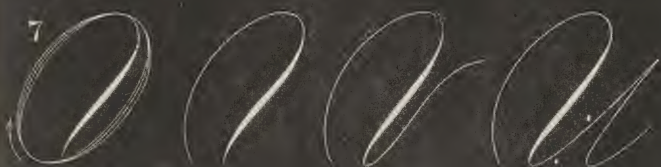
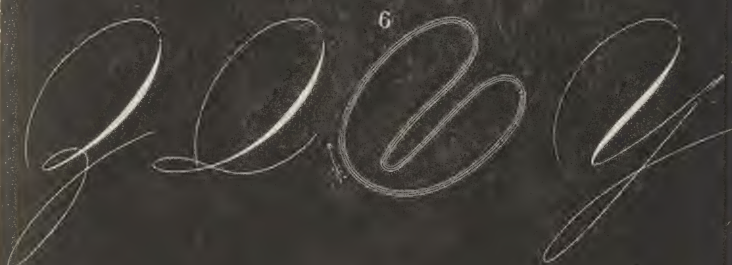
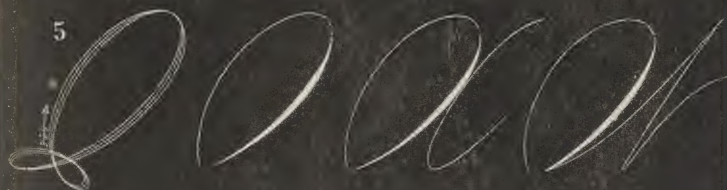
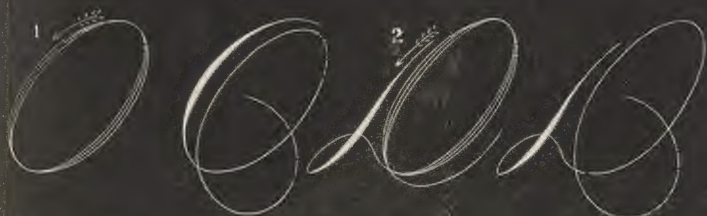
### WHOLE-ARM MOVEMENT.

In this, as the name implies, the whole arm, from the shoulder, is brought into action. The elbow is slightly elevated above the desk, and the hand, as in the Fore-Arm movement, glides lightly on the nails of the third and fourth fingers. For the formation of large capitals and flourishing, this movement is principally used.

“Study earnestly,  
Practice patiently,  
And presently your hand  
Will a master's pen command.”



Employ whole arm Mov<sup>t</sup> with elbow raised





## EXPLANATION OF TERMS.

---

### CHAPTER II.

In order to bring before the pupil, in a compact form, the current terms used in the explanation of principles and letters, this chapter will be found to contain essential information.

"The Main Slant" of script letters, is at an angle of fifty-two degrees with the horizontal, or base line.

"A Space" is one-ninth of an inch in business writing; in ladies' hand it is one-eleventh of an inch.

"The Standard of Measurement" is the small letter *u*, which is one space in height, and the distance, horizontally, between its slanting straight lines, is taken for the measurement in width, which is also one space.

"The Base Line" is that on which the letters rest.

"The Head Line," real or imaginary, is the first above the base line, and one space from it.

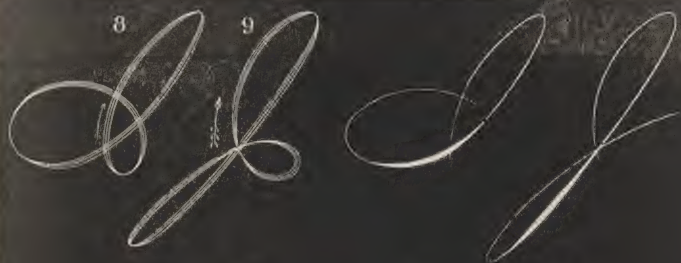
"Intermediate Line" is the second above the base line.

"The Top Line" is at the height of three spaces from base line.

[The following full-page plate, together with the one just given, contains Whole-Arm Movement exercises preceding each capital letter designed to give the learner the requisite form, and when traced with a ceaseless motion of the pen for ten minutes before writing each copy, the mastery of these letters will be made easy and the arm receive indispensable drill.]

8

9



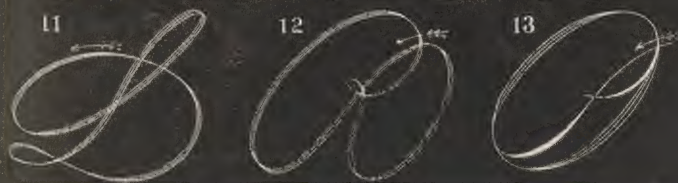
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11

12

13





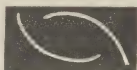
"A Straight Line," is one drawn from one point to another without deviating in its course.

ILLUSTRATED.



"A Curved Line," is one that is flexed, or bent, in a regular form, and forms part of a true circle.

ILLUSTRATED.



"A Right Curve," is a line with its center bent to the right of a straight line; and corresponds to the right side of a circle.

ILLUSTRATED.



"A Left Curve," is the opposite of a right curve, and bends to the left of a straight line; and corresponds to the left side of a circle.

ILLUSTRATED.



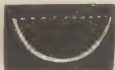
"A Compound Curve," is the uniting of two opposite curves, by one extreme, and extending in the same general direction.

ILLUSTRATED.



"A Horizontal Right Curve," is one with its bow, or convex surface, downward.

ILLUSTRATED.



"A Horizontal Left Curve," is one with its bow, or convex surface, upward.

ILLUSTRATED.



"A Horizontal Line." In writing, a line is said to be horizontal when its extremes are equi-distant from the base line.

ILLUSTRATED.



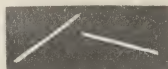
"A Vertical Line," is one which stands at right angles to the base line.

ILLUSTRATED.



"An Oblique Line," is one drawn to any angle between horizontal and vertical.

ILLUSTRATED.



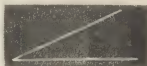
"Parallel Lines" run in the same direction without increasing or diminishing the distance between them throughout their entire length.

ILLUSTRATE.



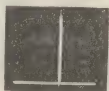
"An Angle," is the meeting of two lines in a point, or the space between two straight lines diverging from a point.

ILLUSTRATED.



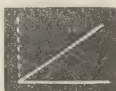
"A Right Angle" is formed by the meeting of horizontal and perpendicular lines, or an angle of 90 degrees, which is one-fourth part of a circle.

ILLUSTRATED.



"An Acute Angle," is one less than a right angle, or less than 90 degrees.

ILLUSTRATED.



"An Obtuse Angle," is one greater than a right angle, or more than 90 degrees.

ILLUSTRATED.



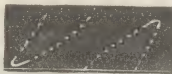
"An Angular Joining," is the uniting of lines in a point.

ILLUSTRATED.



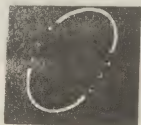
"A Short Oval Turn," is the union of two lines by as close a turn as can be made without forming an angle.

ILLUSTRATED.



"A Full Oval Turn," is larger than the "short oval turn," and is formed by the union at either extremity of a full right and left curve, making a concavo-convex.

ILLUSTRATED.



"A Direct Oval," is commenced with a left curve and a downward movement.

ILLUSTRATED.



"An Inverted Oval," is commenced with an ascending left curve from base line.

ILLUSTRATED.



"Reversed Oval."

ILLUSTRATED.



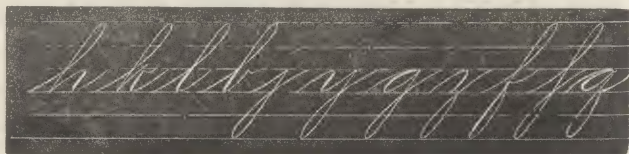
"Horizontal Oval."

ILLUSTRATED.



"Capital Letters" should be three spaces high.

"Extended Loop Letters," above base line, are three spaces high and one-half space wide, and are as follows: *h, k, l, b, f* & long *s*.



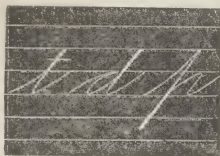
"Descending Loop Letters" are carried downward two spaces

below the base line, and are one-half space wide, measured at right angles to the slant, at center. They are as follows:

j y g z f long s and q.

"Semi-Extended Letters"

Are



(and



by some authors). They extend two spaces above the base line. The *p* descends below the base one and one-half spaces.

CONTRACTED, or SHORT LETTERS, are as follows:



and

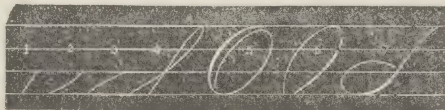


LETTERS terminating at the height of one space, and with a horizontal right curve, are

w v b and o.

TWO LETTERS, the *i* and *j*, have each a characteristic dot, which is formed one space above the slanting straight line of the letter.

## PRINCIPLES.



Principles are the constituent elements used in forming both the large and small letters. The first four are used in the construction of the Small Letters, while all of them enter into the formation of the Capitals. The last three, however, form the principal or most prominent feature of each.

## REMARKS ON MATERIAL.

---

Before commencing to write, the pupil should be provided with *good Paper, good Pens and good Ink*. Steel pens are preferred and it is poor policy to use them after the points become uneven and rough. Great improvement can only be made when a *good* article of stationery is used. It is a mistaken idea which some parents have of providing the learner with very poor material and then expect him to accomplish all that would be possible with a good article in the hands of an expert. Avoid writing on a hard table or desk without having several thicknesses of paper under the one on which you are writing.

Only practice so long as you can do so without assuming a careless or indifferent position. Copy Books are an injury to the learner and a source of useless expense until the learner has acquired a rudimentary knowledge of the art, as in his desire to make his writing look well (before mastering the position and movements) he writes in a cautious, slow manner, cramping the fingers and hand by gripping the holder too tightly; all of which is detrimental to progress and freedom of execution.

A liberal use of scribbling paper is indispensable, and with the movements thus acquired, the mastery of this mechanical branch of education is two-thirds mastered.

A level table is preferred to a slanting desk.

## SMALL LETTERS.

---

ALPHABET BY COMBINATIONS.

---

### CHAPTER III.

We have in the previous chapters learned the principles and movement exercises necessary to enable us to proceed to demonstrate the relations existing between the several letters as shown from the following plates and combinations, which are *photographic illustrations* from "REED'S PENMANSHIP INSTRUCTING CHARTS," where each letter, or part of a letter, in turn is held before the eye of the learner, while other principles, or parts, are added to form new letters. (This is done by rotating the covers, which are made of metal and hinged to and form a part of the Chart.)

The different positions which they may be made to assume to

each other, and their similarities and relations, will be more fully understood by this true and original system of illustration.

### FIRST COMBINATION.

The First Combination contains six letters—*i, u, w, v, b* and *l*. The *i* forms the base or main feature of each.

ILLUSTRATED

with covers open.



The small letter *i* is the easiest letter of the alphabet to form, therefore it is taught first.

ILLUSTRATED.



(The other letters of the combination are hid from view by means of the covers.)

In forming the *i*, we commence on the base line and with a right curve ascend, on connective slant, one space; here form an acute angle and descend on main slant, by a straight line, to base, one space to the right of starting; then turn short and ascend with right curve, on connective slant, one space. Finish with a dot, one space above and on a line with main slant of the letter.

*Note.*—It will be observed, from the twelve letters illustrated in the first and second combinations, that the small *i* forms the base or main feature of each, as demonstrated by aid of the covers on the chart.

The mastery of this letter is very essential, as any error in its formation will be seen in every letter in these combinations.

The learner should observe carefully the acute angle which occurs at its top, as this is seen in sixteen of the small letters, and must be formed invariably at the height of one space.

The second letter of this combination is the *u*, produced by adding to the top of finishing curve of the *i* a straight line drawn on main slant to the base, followed by a short turn and right finishing curve; as seen by rotating covers on Chart.

ILLUSTRATED.

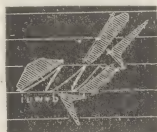


Rule for forming is the same as *i*—without the dot. The three right curves are the same height and are parallel; the straight lines, which are also parallel, unite with the others, forming two acute angles at the top and two short equal turns at the base.

*Note the position of covers in each cut.*

The third letter of this combination is the *w*, shown by modifying the last stroke of the *u*. (See first displayed cut of this Chapter.)

ILLUSTRATED.



The small *u* forms about four-fifths of this letter, and is modified after the completion of second lower turn by ascending one space with a right curve, inclined more to the left, to a point one-half space to the right of preceding angle; here make a dot, finish with a horizontal right curve, one-half space in length.

The similarity between the *v* and the last half of the *w* is

shown by rotating the cover, thus taking from view the first half of the *w*, which leaves the modified *v*.

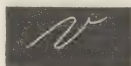
ILLUSTRATED.



It will be observed that to form the *perfect v*, we commence at the base line and ascend with a left curve, one space, on connective slant; turn short to the right and finish the same as the last half of *w*, as shown above.

The *v* proper

ILLUSTRATED.



The modified *v*, as shown in the combination, is in turn transformed into the *b* by adding a loop to the top of it. Illustrated on Chart, by rotating the cover, which presents the loop to view, showing the *b* as completed.

ILLUSTRATED.



The *b* is the fifth letter of this combination, and to form it, we begin on the base line, and with a right curve ascend three spaces; turn short to the left, and descend with a left curve to within one space of base line, crossing first line at this point, forming a loop two spaces long and one-half space wide; then finish as directed in forming last half of *w*, and the *v*, illustrated

above, where the same lines are seen to form this part of all three letters.

The sixth letter of this combination is the *l*.

ILLUSTRATED.



It has the same loop as described in the *b*, and is finished from the base line, the same as the letters *i* and *u*, with the right finishing curve.

## SECOND COMBINATION.

The Second Combination contains the *i*, *t*, *d*, *a*, *g* and *q* (shown with covers open).

ILLUSTRATED.



This combination is a continuation of the preceding one, and as the *i* forms the base of each letter, it is shown first, with covers closed, shutting off the other letters.

ILLUSTRATED.



The *t* is the second letter of this combination. Its relation to

the *i* is shown by rotating a cover. By so doing we exhibit a perfect *t*, having used the *i* to form three-fourths of it.

ILLUSTRATED.



To make the *t*, commence on base line and ascend two spaces, with a right curve on connective slant; retrace on main slant with straight line, having a square shade at top and tapering downward one space; continue on main slant with light line to base and terminate as in small *i*; finish with a short horizontal straight line drawn across the letter one-half space from the top, having two-thirds of its length extending to the right.

The third letter seen in this combination is the *d*.

ILLUSTRATED.



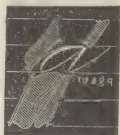
A left curve is prefixed to the *t* (as seen in preceding cut) by rotating the covers, thus presenting the perfect *d*, having used the *t* to form the greater part of it.

To form this letter, commence on base line, ascend with left curve, carried two and one-half spaces to the right and one space above the base line; retrace one-third its length; then separate; descend on main slant with increasing curve to a point on base line one space to the right of starting; turn short and

ascend two spaces; shade and terminate the letter the same as the *t*, omitting the cross.

The fourth letter of this combination is the *a*.

ILLUSTRATED.



*Note.*—The first two-thirds of this letter—*a*—or all except the last downward and finishing strokes, constitutes what is known as the “pointed oval,” and its formation is fully described in the first part of the *d*.

The *a* is formed the same as the *d*, omitting the straight line above the pointed oval, or top of the *i*, as seen by rotating the cover, thereby shutting off the top, and by so doing you produce the perfect letter *a*.

The fifth letter seen in this combination is the *g*, formed by using the same pointed oval as seen in the *a* and *d*, to the top of which is joined angularly an Inverted Fourth Principle (or loop).

ILLUSTRATED.

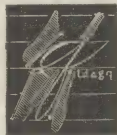


Form the pointed oval, the same as in *a* and *d*; join at the top by an acute angle, and descend with straight line on main slant to base; continue with slight right curve two spaces below; maintaining the same slant, turn short to the left and ascend with left curve, crossing the preceding line at base, and finish

one space to the right of angular joining and one space above the base line.

The sixth letter of this combination is the *q*.

ILLUSTRATED.



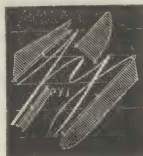
Form this letter the same as the *g* to the completion of pointed oval; from this point descend with straight line on main slant through three spaces; make a short oval turn to the right; ascend with right curve; touch preceding line at base, and finish the same as the *a*, *d*, *t* and *i*, with right finishing curve.

*Note.*—The *t* and *d* have been shown together, thus proving their similarity as to height and shade. The *d*, *a*, *g* and *q* have all been exhibited from the same pointed oval—thus in learning one of them you have mastered the greater part of all. (The oval of the *a*, *d*, *g* and *q* is more inclined than the *o* to admit of an acute angular joining at its top without retracing.)

### THIRD COMBINATION.

The Third Combination contains the letters *p*, *y* and *j* (with covers open, showing them collectively).

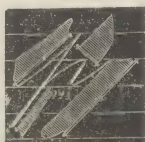
ILLUSTRATED.



In this combination the true relation existing between the *p*,

*y* and *j*, is shown; also wherein the last half of the *p* forms the first half of the *y*.

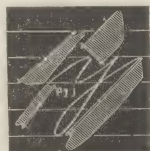
ILLUSTRATED.



The *p* is formed with a right introductive curve, ascending on a slant of thirty-five degrees ( $35^\circ$ ) two spaces above base line, here join by an acute angle, a descending straight line, on main slant, which crosses at base one space to the right of starting; continue with increasing shade and an abrupt termination to one and one-half spaces below base line; retrace the downward stroke to base line; deviate, ascend with left curve on connective slant one space; turn short to the right, descend to base by a straight line parallel with first downward stroke (and one space from it); make a short turn, and terminate with right finishing curve.

The second letter of this combination is the *y*. Its relation to the *p* is shown by removing (by aid of the covers as seen on the Chart) the first half of the *p* from view; and to the point of finishing the *p*, with an angular joining, the inverted Fourth Principle is annexed (by aid of another cover), forming the *y*.

ILLUSTRATED.

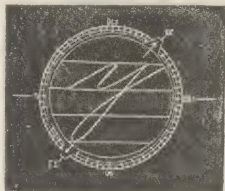


The first part of the *y* is formed the same as the last part of the *p*, above the base line; and the last part, or Inverted Loop

of the *y*, is made precisely like the loop in the *g*, and joins to the finish of the *p* by an acute angle.

The *y*, inverted, makes the perfect letter *h*, and *vice versa*, as shown by rotating the disk (seen on Chart No. 2).

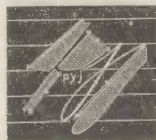
ILLUSTRATED.



The loop of the *h* is the same as in *l*, and the last half of the *h* is the same as the first part of *y*, or last half of *p*.

The third letter of this combination is the *j*; seen by hiding from view the first part of the *y* (shown by rotating the cover).

ILLUSTRATED.



Commence this letter the same as the *i* and finish the same as the *y*, as shown in the former illustration. Dot, one space above, and on a line with straight, downward, stroke of the letter.

#### FOURTH COMBINATION.

The Fourth Combination contains the letters of *f* and *k* (with covers open).

ILLUSTRATED.



In forming the letter *f*, commence at base line, with a right

curve; form the upper loop the same as *h*, *b* and *l*; at base, blend into a slight left curve; descend two spaces below; turn short to the right; ascend with right curve, which touches downward stroke, one-half space above base line, and finishes with a right curve, carried one space to the right and one space above base.

ILLUSTRATED.



The second letter of this combination is the *k*.

ILLUSTRATED.



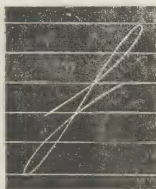
*Note.*—The same loop as seen above base line in *f* is used to form the *k*, and by rotating the covers, one letter is shown as forming the greater part of the other.

Form the loop the same as the upper half of the *f*, to a point on base line one space to the right of starting; here unite by an acute angle, a left curve, carried one and one-quarter spaces above base; continue with increasing curve, to a point on the "head line" one space to the right of loop; unite a horizontal right curve, carried one-half space to the left; here form an obtuse angle, and by straight line, descend to base on main slant; turn short to the right and finish same as *u*.

THE LONG *s*.—The top loop of the long *s* is formed the same

as the loop of the *h* ; and the lower loop and finish are the same as the loop of the *y*.

ILLUSTRATED.



### FIFTH COMBINATION.

The Fifth Combination contains the *r* and *s* joined, showing their similarity in hight and formation.

ILLUSTRATED.



In forming the *r*, ascend, with introductive curve, one and one-quarter spaces above base line; make a small, oblong dot; descend in a vertical line with left curve one-fourth of a space; turn downward, forming an obtuse angle, and descend on main slant with straight line to base; terminate with a right finishing curve.

ILLUSTRATED.



The second letter of this combination is the *s*.

ILLUSTRATED.



Commence with a right curve and carry it to the same height of the letter *r* ; here join by an acute angle, a descending compound curve, which rests on base line three-fourths of a space to the right of beginning; continue with a full oval turn to the left; ascend one-fourth of a space above base; form small dot on right curve; retrace to base, and terminate with a right finishing curve.

### SIXTH COMBINATION.

The Sixth Combination shows the relation between the *n* and *m*, as the *n* forms two-thirds of the latter.

ILLUSTRATED.

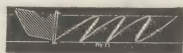


To form the *n*, commence on base line and ascend one space with a left curve on connective slant; turn short to the right; descend on main slant, by straight line, to base; here unite, by an acute angle, a second ascending left curve and second short turn at top and second straight line to base; turn short to the right, and terminate with right finishing curve.

The left curves are parallel; the downward straight lines are also parallel, and one space apart.

The second letter of this combination is the *m*, illustrated by rotating the cover, thereby prefixing another section to the *n*, thus converting it into an *m*.

ILLUSTRATED.



Commence the *m* same as the *n*, forming three equal left curves and three descending straight parallel lines, instead of two as in the *n*.

### SEVENTH COMBINATION.

The seventh combination shows the relation between the *x* and *z*.

ILLUSTRATED.



Form the introductive curve of the *x* precisely like that of the *n*; turn short to the right and descend with right curve (the lower third of which is almost straight), resting on the base three-fourths of a space to the right of starting; ascend on main slant, covering lower half of preceding line; continue one space to

hight of letter and one-third of a space to the right of upper turn; descend, covering upper half of preceding line, to junction; deviate, and with increasing left curve continue to base line, one-third of a space to the right of preceding point on base; make a short turn to the right, and terminate with right finishing curve.

The second letter of this combination is the *z* (seen by rotating the covers from position had in preceding cut).

ILLUSTRATED.

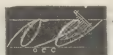


Form its first part like left half of *x* (as shown from the cut) to a point on base at termination of first half of *x*; here unite, by an acute angle, a horizontal right curve, which rises above and crosses base line one-quarter of a space to the right; descend with a right curve on main slant two spaces; turn short to the left and ascend, crossing the right curve at base, and terminate as in *j*, *y* and *g* with a left finishing curve.

#### EIGHTH COMBINATION.

The Eighth Combination contains the *o*, *e* and *c*, classed together, owing to their general oval appearance.

ILLUSTRATED.



The first letter of this combination is the *o*.

The *o* is formed with an introductive left curve, carried on connective slant one and one-half spaces to the right and one above base line; here unite by an acute angle a second left curve; descend to base line on main slant; make a short turn to the right; ascend with a corresponding right curve, uniting with

preceding line at top; and finish same as *v*, *w*, and *b*, with horizontal right curve.

The second letter of this combination is the *e*, as seen in the above cut, and it is formed with a right introductive curve carried to the height of one space; here make a short turn to the left, and descend by a left curve, on main slant, crossing right curve, forming a loop two-thirds the length of the letter and a quarter of a space wide; continue to base line; turn short to the right and terminate with a right finishing curve.

The third letter of this combination is the small letter *c*.

ILLUSTRATED.



By rotating the cover of preceding cut the *e* is shown as forming three-fourths of the *c*.

To make this letter, form introductive curve same as *e*; at the height of one space join by acute angle a descending straight line, on main slant, one-third of a space in length; make close, short turn to the right; ascend as before, by right curve, to the full height of the letter, crossing preceding line at top; make a very short turn to the left, and finish from this point same as the letter *e*.



“COUNT that day lost  
Whose low descending sun  
Views at thy hand  
No worthy action done.”

## THE PEN.

O! Potent Pen! of countless worth,  
Whence was thy origin and birth?  
Did Tubal Cain invent thee? say?  
In far off centuries away?

Or did the man of Uz who said,  
"Engrave with iron pen and lead,  
My deep afflictions in the rock,  
That they may live till time's last shock?"

Or they of Nimrod's land by night?  
From Belus' tower where stars were bright,  
In studying the Zodiac?  
And planets in their onward track?

Or they beside the Nilus flood,  
Or monuments that so long have stood  
In hieroglyphics which have told  
The secrets deep that were of old?

Or was it He the Mighty God,  
When trembling Sinai He trod,  
His finger tracing for his pen,  
On stony leaves his laws for men?

Though wrapt in mystery thy birth,  
Wondrous have been thy goings fourth,  
For men what treasures hast thou kept  
That otherwise would ever slept.

From age to age thou hast brought down  
The wisdom and the high renown  
Of Hero, Poet, Statesman, Sage;  
Increasing light with every age.

And the Beginning bye and bye  
Unto the ending thou shalt tie.  
And then, and then and not till *then*,  
Will all thy power be known, O! Pen.

*Hager.*

preceding line at top; and finish same as *v*, *w*, and *b*, with horizontal right curve.

The second letter of this combination is the *e*, as seen in the above cut, and it is formed with a right introductive curve carried to the height of one space; here make a short turn to the left, and descend by a left curve, on main slant, crossing right curve, forming a loop two-thirds the length of the letter and a quarter of a space wide; continue to base line; turn short to the right and terminate with a right finishing curve.

The third letter of this combination is the small letter *c*.

ILLUSTRATED.



By rotating the cover of preceding cut the *e* is shown as forming three-fourths of the *c*.

To make this letter, form introductive curve same as *e*; at the height of one space join by acute angle a descending straight line, on main slant, one-third of a space in length; make close, short turn to the right; ascend as before, by right curve, to the full height of the letter, crossing preceding line at top; make a very short turn to the left, and finish from this point same as the letter *e*.



“COUNT that day lost  
Whose low descending sun  
Views at thy hand  
No worthy action done.”

## THE PEN.

O! Potent Pen! of countless worth,  
Whence was thy origin and birth?  
Did Tubal Cain invent thee? say?  
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"Engrave with iron pen and lead,  
My deep afflictions in the rock,  
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From Belus' tower where stars were bright,  
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Or they beside the Nilus flood,  
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From age to age thou hast brought down  
The wisdom and the high renown  
Of Hero, Poet, Statesman, Sage;  
Increasing light with every age.

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Unto the ending thou shalt tie.  
And then, and then and not till *then*,  
Will all thy power be known, O! Pen.

*Hager.*

## CAPITAL LETTERS.

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### CHAPTER IV.

The capitals extend three spaces above the base line; and, therefore, correspond in height with the loops of the small letters.

The *J*, *Y* and *Z* extend below the base line two spaces, and have the same proportions as the *j*, *y*, *z*, *g*, *f*, and long *s*, of the small letters.

The capitals are divided into three classes, or groups, and are illustrated by the principles most prominent in their formation.

The Fifth Principle is the direct oval or capital *O* (seen on revolving disk of Chart No. 1).

ILLUSTRATED.



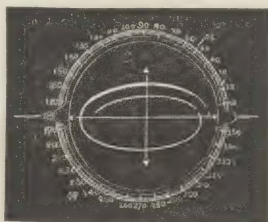
Any desired degree of slant can be indicated on the graduated scale by rotating the disk.

*Note.*—By means of this graduated scale and disk, the task

of mastering longitude and time; as, also, the mode of illustrating the 360 degrees in a circle is made very plain and simple, and is, therefore, more readily comprehended by the student.

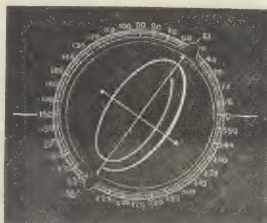
The horizontal oval is shown by rotating the disk  $52^{\circ}$  to the right of main slant.

ILLUSTRATED.



Rotate the disk  $128^{\circ}$  further, and the inverted oval, or Sixth Principle, is seen.

ILLUSTRATED.



In like manner any desired degree of slant can be illustrated, by rotating the disk; thus showing a uniformity in the form of the ovals; by changing the position, without altering their form or proportions.

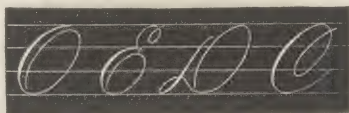
The above ovals as a movement exercise, to drill the muscles of the arm, in acquiring a free and easy movement, are almost, indispensable. They should be formed with a ceaseless motion of the pen, repeating the stroke many times in the same place, without lifting the pen, or forming a shade.

The greatest care should be exercised, as to the proper method of holding the pen, hand, and arm; as we are degenerating, instead of improving; whenever we find ourselves in a careless,

indifferent position; and scribbling, instead of warping every nerve; in an earnest endeavor to improve upon each succeeding letter; until we have gained the mastery of those pleasing curves, and graceful shades, that only come from earnest application, and ceaseless practice.

The easiest of the capital letters to form are those made from the Fifth Principle, or Direct Oval. The following four are illustrated from it (on Chart No. 1).

ILLUSTRATED.



### FIRST COMBINATION.

*Note.*—In order to show all the lines necessary to form the letters in each combination the covers are thrown open, thereby uncovering the whole combination.

ILLUSTRATED.



[The foregoing constitutes the First Combination of capital letters.]

The first letter of this combination is the capital *O*, or Fifth Principle.

ILLUSTRATED.



*Note.*—The covers, as seen in this cut, hide from view the lines that with the *O* form the *E* and *D*.

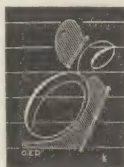
To form this letter, begin at full hight (three spaces above

base line); with full left curve descend, to base line on main slant, turning roundly ascend with full right curve to within one-third of a space of starting; continue in a second round or oval turn, a second descending left curve, parallel with the first, and finish the letter one-half of a space above the base line.

Distance between downward strokes, one-third of a space, and also one-fifth of the width of the letter, measured at right angles to its slant. Width, two-thirds the length of the letter.

The second letter of this combination is the *E*, illustrated by using the *O* (as seen in preceding cut) to form two-thirds of it; and is shown by rotating the cover above the *O*.

ILLUSTRATED.



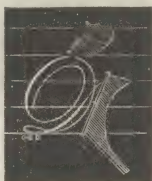
To form this letter, commence at the top line (or three spaces above the base) and by a left curve, descend three-fourths of a space, on main slant, join with short turn a corresponding right curve, and ascend, crossing the left curve just below starting point, continue to full height of letter, join with an oval turn a second left curve; descend on main slant one and one-fifth of a space, form a small loop extending to the right, and at right angles to the main slant; to this attach a direct oval which should extend to, and rest upon the base line, finish same as the capital *O*.

Full height three spaces, height of base oval, two spaces, and one and one-half spaces wide. Top one-third the length of the

entire letter. Width of top one space. Small loop one-quarter of a space wide, and one-third of a space long.

The third letter of this combination is the *D*.

ILLUSTRATED.



The relation existing between this letter and the *O* and *E*, is seen by using the same Fifth Principle, or oval. The top of the *E* being covered from view, and the requisite lines for forming the *D* added by rotating the covers, as seen from the above cuts.

In forming this letter, commence two spaces above base line and descend with compound curve (first left and then right curve) on main slant, to the base line, continue to the left two-thirds, of a space, turn short; form corresponding left curve crossing the preceding line near base, thereby forming a horizontal loop, one space in length and one-fourth of a space in width; continue to base line, one-third of a space to right of crossing, unite, with on oval turn, a right curve; ascend, crossing stem near point of starting, and at the height of three spaces join with oval turn, the direct oval which should rest directly over the small loop at base and one-fourth of a space above it.

Height, three spaces. Width, two spaces and a half. Height of stem two spaces. Distance between stem and first ascending right curve, and the stem and direct oval, each one-third of a

space. Distance between oval and base line, one-half space.

The current style of *D*.

ILLUSTRATED.



To form this letter, begin two and one-half spaces above base line, and by a compound curve (first left and then right curve) descend to base on main slant, turn short to the left, and with a left curve ascend and cross preceding line forming a loop three-fourths of a space long and one-third of a space wide; at this point blend into a left curve, carried to, and resting on the base line two spaces to the right of loop; with full oval, turn to the right and ascend, with right curve, three spaces, with full oval; blend into a corresponding left curve drawn one-third of a space to the right of starting and terminate one-half space above the base line.

The letter *C* is formed with the same direct movement as the *O*, *E* and a greater part of the *D*.

ILLUSTRATED.



In forming the *C*, commence three spaces above the base line, descend on main slant with left curve, two and one-fourth spaces, join with oval turn, and ascend with right curve crossing the left curve one-third of a space from its top, and continue up to the height of three spaces (from base); unite with a full oval turn, a descending left curve on main slant; blends into a full

oval, and terminate the letter, from base, with right finishing curve.

Full hight, three spaces. Length of loop, two spaces. Width of oval, one and one-half spaces divided into two equal parts by first descending left curve.

The Sixth Principle is made by the reverse movement, and is called the Inverted Oval, made from left to right.

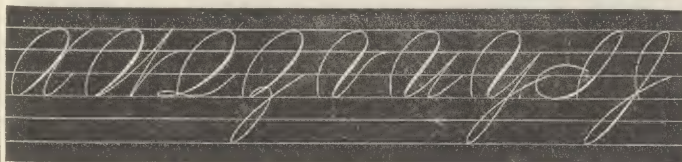
ILLUSTRATED.



To make this, ascend from base with full left curve three spaces, on main slant; with full oval, unite, a descending, right curve, which rests on base line one-half space to the right of starting.

Hight, three spaces. Width, one-half its hight, measured at right angles to its slant.

Nine letters are formed from this Sixth Principle (and illustrated by aid of covers on Chart No. 1). They are

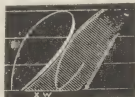


## SECOND COMBINATION.

The Second Combination contains the *X* and *W*.

The easiest of these letters is the *X*, therefore shown first.

ILLUSTRATED.

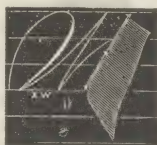


First half consists of the inverted oval described above. From

a point one and two-thirds spaces to the right of the top of the inverted oval or Sixth Principle (as above described) a left curve, descends, on main slant, touching the oval, one and one-third spaces from its top, continuing to base, one and one-half spaces to the right of first part, and terminates with right finishing curve.

The second letter of this combination is the *W*.

ILLUSTRATED.



*Note.*—By rotating the cover, the lines that formed the last of the *X*, are hid from view, and at the same time we uncover those requisite to complete the *W*, using the same principle to show both letters.

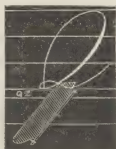
We form the inverted oval of the *W* same as in the *X*, unite on base line a right curve with an acute angular joining, and ascend to full height of the letter, and one and two-thirds spaces to the right, and even with the top of first part, with second angular joining descend with slight left curve on main slant, touching base, one and two-thirds spaces to the right of former rest, with a third angular joining ascend with a left curve, two spaces, and one to the right of preceding line, and thus finish letter.

Height, three spaces. Distance from top of inverted oval to upper angular joining, one and two-thirds spaces. Distance between angular joining on base line, one and two-thirds spaces. At half height of the letter, all spaces at right of oval, are equal.

### THIRD COMBINATION.

The Third Combination contains the *Q* and *Z*.

ILLUSTRATED.



The inverted oval of the *Q* has the same proportions as to height and width as in the *X* and *W*.

The right curve of the oval, is carried well to the left, crossing the left curve near base line, and joins with a short oval turn, a left curve nearly horizontal, which crosses downward, right curve one-fourth of a space above base (forming a loop one space in length), continue to the right and rest on base line two-thirds of a space to the right of inverted oval, and finishes the letter with a right finishing curve.

Height, three spaces. Width of inverted oval, one and one-half spaces. Width of small loop, one-fourth of a space; and length of the same, one space.

The second letter of this combination is the *Z*.

ILLUSTRATED.



*Note.*—The *Q* is converted into the *Z* by rotating the cover, thus adding the loop as seen above.

To make this letter, proceed as with the *Q* to a point where the small loop terminates, then with oval turn, and by right curve, descend, crossing base line three-fourths of a space to the right of loop; continue below base two spaces, turn short to the left and ascend; crossing preceding line at base, and finish same as the small *z*, the loop below base being the same length, and width.

## FOURTH COMBINATION.

The Fourth Combination shows the relation between the *V*, *U* and *Y* (showing three letters in one, see Chart No. 1).

The *V* is shown first, as it is the easiest formed.

ILLUSTRATED.



*Note.*—Position of the covers as rotated shuts off all except the *V*.

In forming the *V*, make inverted oval, as in last combination, to a point two spaces above base, blend into a straight line and descend to base, on main slant, and two-thirds of a space to the right of beginning; turn short to the right and ascend with slight right curve, and terminate two spaces from base line and one space to the right of descending stroke.

Hight, three spaces. Distance between inverted oval and finishing right curve, one space.

The second letter of this combination is the *U*.

ILLUSTRATED.



*Note.*—By rotating the upper cover the *U* is shown, and its relation to the *V* is illustrated.

To the finishing right curve of the *V*, two spaces above base, unite with an angular joining a straight line, descend to base on

main slant; turn short, ascend and complete the letter with a right finishing curve on connective slant.

Main hight of *U*, three spaces. Oval, one and one-half spaces wide. Right half, two spaces high. Distance between downward strokes, one space.

The third letter of this combination is the *Y*.

ILLUSTRATED.



*Note.*—The lower cover, as seen in preceding cut, is rotated to the right, thereby adding a loop, and the *U* is converted into and forms the greater part of the *Y*.

This letter is formed the same as the *U*, to a point near the base on last descending straight line, which blends into a slight, right curve, carried downward on main slant two spaces below base line, and here, with a short oval turn, joins a left curve which ascends, crossing the preceding stroke at base, and terminates with a finishing left curve.

Loop below base, two spaces long and a half space wide, measured at right angles to slant.

### FIFTH COMBINATION.

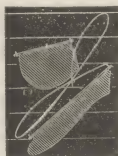
The Fifth Combination contains the *I* and *J*.

ILLUSTRATED.



The first letter of this combination is the *J* (shown by rotating the left cover of preceding cut).

ILLUSTRATED.

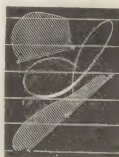


To form the *J*, ascend from base line three spaces, with a full left curve; make a short oval turn to the right, descend with slight right curve two spaces on main slant; blend into a straight line and continue to base line, crossing the left curve one-third of a space above base; from here descend with slight right curve on same slant, two spaces; turn short to the left, and ascend, crossing preceding line one-third of a space above base, and terminate same as *Y*.

Hight of this letter above base, is three spaces and two below. Width of upper loop, one space. Lower loop, one-half space. Finish same as *Y*.

The second letter of this combination is the *I* (shown by rotating the covers of preceding cut, thereby converting the *J* into the *I*).

ILLUSTRATED.



Form the *I* at the top same as the *J*, to a point one space above base line on descending stroke; blend into a greater curve and cross the left curve one-half of a space above base, and rest on base line one space to left of starting; with a full oval, join an ascending left curve, completing the letter with a CAPITAL STEM oval to left of loop. (*See Capital Stem on page 57.*)

Hight of upper oval or loop, three spaces. Width, same as *J*.  
Hight of full oval at base, one and one-half spaces.

The capital *I* contains the modified Sixth and Seventh Principles. Thus, in forming this letter, we finish the Inverted Oval letters and, at the same time, enter upon those formed from the Capital Stem, as seen in the base oval of the Capital Stem, or Seventh Principle.

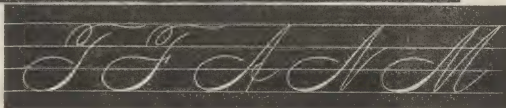
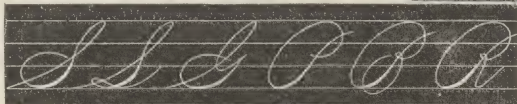
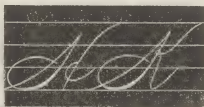
To form the CAPITAL STEM, commence three spaces above the base line and descend with compound curve (first left, then right) on main slant to the base line; with increasing curvature in lower half, blend into a full left curve, which corresponds with preceding right curve, and rises one and one-half space above base and one-third of a space to the left of stem, and terminates one and one-fourth spaces above base line, forming an oval which stands at an angle of  $15^{\circ}$  with base.

The CAPITAL STEM is three spaces high. Base oval, one and one-half spaces high and two and one-half spaces long, on an angle fifteen degrees with horizontal line. Width of oval (measured at right angles to its slant), one and one-half spaces.

ILLUSTRATED.



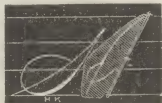
The following letters (fourteen in number—with the *I* just illustrated) are formed from the above Capital Stem :



## SIXTH COMBINATION.

The Sixth Combination contains the *H* and *K* (with last half of the *H* mounted on the cover, as seen in cut).

ILLUSTRATED.

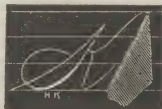


In forming the *H*, commence with a right curve; ascend on main slant through two and one-half spaces, above base line, join by an acute angle a modified seventh principle (capital stem), and finish with base oval, same as the *I*; lower part of the oval crossing right curve three-fourths of a space from commencement, thus completing first half of letter. The ascending right curve should divide the oval just below its center. For last half of letter, commence two spaces to the right of stem and three spaces above the base line, descend, forming a left curve (which is fullest in upper half), resting on base one and two-thirds spaces to the right of oval. To form the finish, commence one and one-fourth spaces above base; descend with left curve through middle of space between stem and downward left curve to within one-half space of base; unite with right curve and terminate the letter one space above base and one space to the right of left curve.

Hight of stem, two and one-half spaces. Hight of left curve, three spaces. Width between stem and left curve, two-thirds of a space, measured one space above base.

The second letter of this combination is the *K*.

ILLUSTRATED.



*Note.*—Rotate the cover, as seen in preceding cut (illustrated

on Chart No. 1), and the modified stem of the *H* is used to form the first half of the *K*, which shows their similarity.

To make this letter, form the first half same as the first half of *H*; then from a point (same as in *H*) three spaces above base and two spaces to the right of stem, descend (on a slant of about  $45^\circ$ ) with a compound curve (first a left and then a right curve) one and one-half spaces, touching stem angularly; then descend with second compound curve (first right and then left curve) to base, one and two-thirds spaces to the right of stem; turn short, and finish with a right finishing curve.

Hight of stem, two and one-half spaces. Ascending right curve cutting oval just below its center. Full hight of right half, three spaces. Distance from stem to short turn on base, one and two-thirds spaces. Compound curves touches stem one and one-half spaces above base.

#### SEVENTH COMBINATION.

The Seventh Combination contains the letters *S*, *G* and *L*.

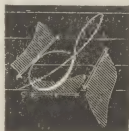
ILLUSTRATED.



(On the rear side of the covers of the above cut are the requisite lines, taken with those in view, to show the *S*, *G* and *L* separately.)

The first letter of this combination is the *S*.

ILLUSTRATED.



(One cover being rotated from the position seen in preceding cut.)

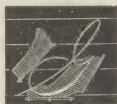
In forming this letter, we ascend from base with a right curve

on main slant, three spaces; then turn short to the left, join a modified capital stem; which crosses the right curve one and one-half spaces from top; blend into base oval, which rests on base line one and one-half spaces to the right of starting point of right curve; cross right curve two-thirds of a space to the right of the beginning, rising one and one-half spaces above base, and terminate one-fourth space below and to the left of central crossing of right curve.

Hight, three spaces. Loop, one and one-half spaces long. Width of loop, one-half space. The ascending right curve divides base oval just below the center.

The second letter of this combination is the *G*.

ILLUSTRATED.



*Note.*—By this cut a second cover is seen to be rotated which takes from view part of the *S* and at the same time supplies the lines which, with the greater part of the *S*, form the letter *G*.

The *G* is formed the same as the *S* to the completion of loop; from here continue with increasing left curve to within one space of base; unite with an oval turn an ascending right curve, carried up one-half of a space, and two-thirds of a space to the right of upper loop; join angularly a modified capital stem, and terminate same as the *S*.

Hight and width of loop, same as *S*. Hight of oval, one and one-half spaces. Oval rests on base one and one-half spaces to the right of starting point.

The third letter of this combination is the *L*.

ILLUSTRATED.



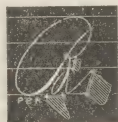
*Note.*—The relation between the *L*, *G* and *S* is shown by rotating the covers as seen in preceding cut.

The *L* is formed precisely like the *S* to a point to the left of second crossing of right curve; then turn short and with a left curve, carried to the right, cross modified stem near base, forming a horizontal loop one-fourth of a space wide and one space long; continue to base, two-thirds of a space to the right of small loop, and terminate with a right curve, one space above base and one space to right of stem.

### EIGHTH COMBINATION.

The Eighth Combination contains the letters *P*, *B* and *R*.

ILLUSTRATED.



The *P* forms about four-fifths of the *B* and *R*, and being the easiest constructed, is formed first.

ILLUSTRATED.



*Note.*—The covers as seen in preceding cut being rotated or closed, shows the *P* only.

To form this letter, commence two and one-half spaces above the base, descend with modified capital stem to base line; blend into an oval turn and ascend with full left curve, three spaces, on main slant; unite with a second oval turn and descend with full right curve (crossing the stem one-half of a space from its beginning) one and one-half spaces; cross the stem a second time (at mid-height) and terminate one-fourth of a space to its left.

Height, three spaces. Width, one and one-half spaces.

Finishing right curve is carried to the right of stem, one-half

of a space, and terminates the letter a quarter of a space to its left.

The second letter of this combination is the *B*.

ILLUSTRATED.



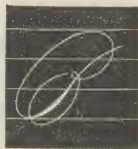
*Note.*—Upper and lower covers rotated, thereby presenting the right and left curves which, with the *P*, forms the *B*.

To the termination of the *P* unite a right curve, which forms a narrow loop encircling the stem and stands at right angles to its slant, one and one-half spaces from the top of the letter; thence descend on main slant, and one-half space to the right of stem, to base; turn short to the left, and finish with a left curve three-fourths of a space long, on main slant, and one-fourth of a space to the left of preceding line.

Hight, three spaces. Width, one and one-half spaces. Distance from stem to right of letter, above and below, each, one-half space.

The above *B* is preferred for actual business writing, as the pen is not lifted in forming a word. But as the following has been in more general use, we present both.

ILLUSTRATED.



To form this letter, proceed as described above to completion of small loop; continue with right curve on main slant one-half of a space to right of the stem, and carried one-fifth of a space below base; blend into a left curve and ascend, crossing the

stem at base, and terminate one and one-half spaces above base line and to the left of loop crossing, one-third of a space.

The third letter of this combination is the *R*.

ILLUSTRATED.



*Note.*—Shown by rotating the lower covers of the combination, which removes the *B* and presents the *R* to view.

In forming this letter, proceed as in the *B* to completion of narrow loop; thence with a compound curve (first right, then left curve) descend to and rest on base one and one half spaces to the right of modified stem; turn short to the right and finish same as the *K*, with a right finishing curve.

#### NINTH COMBINATION.

The Ninth Combination contains the *T* and *F*—the *T* being the easiest formed is shown first.

ILLUSTRATED.



*Note.*—The cover hiding from view the dash, which is the distinguishing feature between the *T* and *F*.

To form the *T*, commence two and one-half spaces above base line and descend on main slant, making a modified capital stem (forming base oval according to rule given for seventh principle), being modified only in having a slightly increased curvature in the first curve and in falling short one-half space from the full hight, of three spaces.

In forming the cap, commence one space to the left of stem and two spaces above base line with a left curve, ascend to full hight of the letter (three spaces above base); turn short to the right and blend into a corresponding right curve; descend **one**

space on main slant; turn short, and ascend with a left curve, crossing preceding right curve near its upper part (forming a loop one-third of a space wide) continue to full height of three spaces and to a point one-half space directly above the stem; then terminate with a horizontal right curve, carried one and one-half spaces to right of stem.

Distance between starting of cap and top of stem, one space. Width of loop of cap, one-third of a space. Distance on either side of loop from starting of cap to top of stem, each one-third of a space.

The second letter of this combination is the *F*.

ILLUSTRATED.



*Note.*—The cover rotated to the right, uncovers the small dash which changes the *T* to *F*.

The *F* is formed the same as *T*, differing only in the termination of the base oval, which changes into a slight right curve and crosses the stem at mid height of same; ascend to half height of the letter; here unite by an acute angle a descending left curve, on main slant, one-fourth of a space in length.

The dash is a characteristic of this letter.

#### TENTH COMBINATION.

The Tenth Combination contains the *A*, *N* and *M*.

ILLUSTRATED.



*Note.*—The requisite lines for forming the *N* and *M* (in connection with the *A*) respectively are on rear side of first and second covers.

The first letter of this combination is the *A*, formed from the perfect capital stem (or seventh principle) as follows: From

the top of capital stem a slight left curve descends, resting on base one and two-thirds spaces to the right of stem. Finish the letter with left and right curve, same as described in finishing the *H*.

The second letter of this combination is the *N*.

ILLUSTRATED.



*Note.*—By rotating the first cover of preceding cut the *A* is modified and the *N* formed, by the cover hiding a section of the former from view and supplying the requisite curve for the *N*, as seen in above cut.

In forming this letter, proceed as with the capital *A* to the point of last rest on base line; here make a very short turn to the right and with a left curve ascend two spaces, and terminate one space to the right of preceding curve and two above base line.

*Note.*—The upper third of the last ascending stroke may have a slightly increased curvature.

The third letter of this combination is the *M*.

ILLUSTRATED.



*Note.*—To the *N* we affix the lines hid on rear side of the cover, and with the *N* unchanged (on Chart) we add lines to form the perfect *M*; the *N* forming three-fourths of it.

The finishing left curve of the *N* is slightly modified and continued to full height of stem, and one space to the right; here by an acute angle unite a descending left curve; continue to and rest on base one space to the right of previous turn; then with a short turn blend into a right finishing curve.

Height, three spaces. Width at top of letter, one space. At

one-half its height it is divided into three equal spaces of one-third of a space each. Distance on base line from the stem to last turn, two and two-thirds spaces. Stem as previously analyzed.

*Note.*—By aid of this mechanical apparatus all of the small letters have been shown from eight combinations, or monograms. Ten combinations embrace all of the capital letters.



## ABRIDGED LETTERS.

To simplify the labor of writing, as well as to give rapidity of execution, a style is employed by many of our best penmen by omitting the ascending stroke in all loop letters used in commencing or ending a word. Also the introductive curves of all letters having an angular joining at the head line, as seen in *a, d, g, q, j, i, t, u, w, o* and *c*.

The finishing curves are omitted in the following letters when they appear at the end of a word, *o, r, s, t, h, k, p, e* and *n*.



## SPACING.

Uniform spacing is indispensable in the production of good penmanship.

Letters in a word should be one and one-fourth spaces apart. Words in a sentence are two spaces apart. (The introductive curve starts on base line one space to the right of preceding letter, which is directly beneath the termination of former word.) Distance between sentences, four spaces (or twice the distance between words). Small letters following a capital letter should commence a quarter of a space to the right, where they do not join.

## SHADING.

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Shading is not essential to good penmanship. It is, so to speak, an embellishment, or the ornamental part of a letter; hence skill and taste are very necessary in its use. Bad shading in writing is like an indiscriminate use of superlatives in speaking, both better be omitted; but when properly executed and not used to excess, it adds greatly to the grace and beauty of penmanship, and is almost indispensable in ornamental writing and pen drawing.

The shade on a letter will correspond with the movement and pressure given to the pen.

If you would make a "true-cut" shade, a rapid movement is required, and the width of the shade will be governed by the distance between the nobs of the pen, which are distended or contracted as you increase or diminish the pressure.

Shades on curved lines should be the widest at the middle of the curve, increasing to and diminishing from its center.

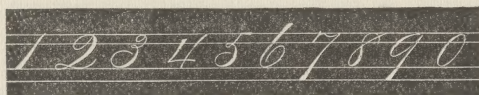
In shading straight lines, as found in the small letters *t* and *d*, spread the points of the pen until the shade is the desired width, and then gradually lessen the pressure as you descend to the base line.

To form shades with an abrupt termination, as seen in the small letter *p*, gradually increase the pressure on the pen as you descend until the desired length is attained, then lift the pen quickly, forming a square shade.

Shades should not occur oftener than every other letter, the last one appearing on the last downward stroke of the word.

The most approved plan of shading the various letters will be seen by referring to the several illustrations of this work.

## FIGURES.



After becoming familiar with the forms and principles used in constructing script letters, the task of learning the figures will be found comparatively easy, as they contain the same principles. Practice is the only sure road to perfection and rapidity in their formation, both of which should receive the closest study and application. Legibility in figures is indispensable as they represent results, and dates, which, if illegible, might be the cause of serious loss.

A common error is the forming of figures on too large a scale, as they are harder to read, and require more time to execute them. As a guide to the learner, we would recommend the use of paper rules on a scale of about six figures to the inch.

